

APPENDIX

IN THE CLAIMS:

The following claim amendments were entered above:

1. (Fourth Time Amended) A method to inhibit expression of a target gene in a cell in vitro comprising introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, wherein the RNA [consists essentially of a double-stranded structure having a first] is a double-stranded molecule with a first strand consisting essentially of a ribonucleotide sequence which corresponds to a nucleotide sequence of the target gene and a second strand consisting essentially of a ribonucleotide sequence which is complementary to the nucleotide sequence of the target gene, wherein the first and the second ribonucleotide sequences are separate complementary sequences that hybridize to each other to form said double-stranded [structure] molecule, and the double-stranded [structure] molecule inhibits expression of the target gene.

15. (Twice Amended) The method of claim 1 further comprising synthesis of [the two complementary] said first and second RNA strands and initiation of RNA duplex formation outside the cell.

16. (Twice Amended) The method of claim 1 further comprising synthesis of [the two complementary] said first and second RNA strands and initiation of RNA duplex formation inside the cell.

22. (Fourth Time Amended) A method to inhibit expression of a target gene in an invertebrate organism comprising:



- (d) providing an invertebrate organism containing a target cell, wherein the target cell contains the target gene and the target cell is susceptible to RNA interference, and the target gene is expressed in the target cell;
- (e) contacting said invertebrate organism with a ribonucleic acid (RNA), wherein the RNA [consists essentially of a double-stranded structure formed by two separate ribonucleic acid strands and those ribonucleic acid strands are each able to specifically hybridize to the target gene and to each other] is a double-stranded molecule with a first strand consisting essentially of a ribonucleotide sequence which corresponds to a nucleotide sequence of the target gene and a second strand consisting essentially of a ribonucleotide sequence which is complementary to the nucleotide sequence of the target gene, wherein the first and the second ribonucleotide sequences hybridize to each other to form the double-stranded molecule; and
- (f) introducing the RNA into the target cell, thereby inhibiting expression of the target gene.

39. (Fourth Time Amended) A kit comprising reagents for inhibiting expression of a target gene in a cell,

wherein said kit comprises (a) means for introduction of a ribonucleic acid (RNA) into the cell in an amount sufficient to inhibit expression of the target gene, and (b) the RNA; wherein the RNA [consists essentially of a double-stranded structure formed by two separate strands with a first] is a double-stranded molecule with a first strand consisting essentially of a ribonucleotide sequence which corresponds to a nucleotide sequence of the target gene and a second strand consisting essentially of a ribonucleotide sequence which is complementary to the nucleotide sequence of the target gene, wherein the first and the second ribonucleotide sequences hybridize to each other to form the double-stranded [structure] molecule.